

Appl. No. 09/228,710  
Amdt. dated June 26, 2003  
Reply to Office Action of 4/8/03

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This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (Amended) A method for providing power within a telephone server coupled to a computer system via an interface bus, to a maximum number of telephones, and to a telephone trunk, the computer system providing a primary voltage and a secondary voltage, the method including:

receiving the primary voltage and the secondary voltage from the computer system;

generating ringer power in response to the primary voltage;

generating direct inward dialing power in response to the primary voltage, the direct inward dialing power configured to provide a first operational voltage for telephones from the maximum number of telephones, when the telephones receive telephone calls directly from the telephone trunk;

generating second operational voltage in response to the primary voltage for the telephones from the maximum number of telephones, when the telephones receive telephone calls from other telephones from the maximum number of telephones; and

generating a ringing signal in response to the ringer power and to the secondary voltage;

wherein a peak voltage of the ringing signal is provided to no more than approximately one half of the maximum number of telephones at a time,

and wherein the telephones are on separate circuits.

2. The method of claim 1 further comprising:

generating an indicator light signal in response to the primary voltage,

wherein a peak voltage of the indicator light signal is provided to no more than approximately a half of the maximum number of telephones at a time.

3. The method of claim 1 further comprising:

wherein the indicator light signal has a duty cycle of approximately 50 percent.

4. The method of claim 1 further comprising:

generating indicator light voltage in response to the primary voltage;

wherein a peak voltage of the indicator light voltage is provided to no more than approximately a quarter of the maximum number of telephones at a time.

5. The method of claim 1 wherein the ringing signal has a duty cycle of approximately 33 percent.

6. The method of claim 5 wherein a peak voltage of the ringing signal is provided to no more than approximately one third of the maximum number of telephones at a time.

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7. The method of claim 1 wherein the first operational voltage is approximately twice the second operational voltage.

8. The method of claim 1 further comprising:  
loading driver software for the telephone server on the computer system; and  
configuring the telephone server with the driver software, before providing the ringer power.

9. (Amended) A telephone server coupled to a computer system via a computer bus, configured to provide output power and signals to a plurality of telephones, and to a telephone trunk, the computer system providing a primary voltage and a secondary voltage, the telephone server comprising:

a transformer circuit configured to receive the primary voltage and to provide first operational power in response to the primary voltage signal, to provide second operational power in response to the primary voltage, and to provide ringer power in response to the primary voltage, the first operational power configured to power telephones that receive telephone calls from the telephone trunk, the second operational power configured to power telephones that receive telephone calls from other telephones of the plurality of telephones; and

    ringer circuitry coupled to the transformer circuit configured to receive the ringer power, to receive the second voltage, and to provide a ringing signal in response thereto;

    wherein the ringer circuitry is configured to provide a peak voltage of the ringer power to no more than approximately one half a maximum number of telephones that may be coupled to the telephone server at a time, and

wherein the telephones are on separate telephone lines.

10. The telephone server of claim 9  
    wherein the transformer circuit is also configured to provide an indicator light power in response to the primary voltage, and

    wherein indicator light circuitry is configured to provide a peak voltage of the indicator light power to no more than approximately one quarter the maximum number of telephones.

11. The telephone server of claim 10 wherein the indicator light circuitry is configured to provide an indicator light signal in response to the indicator light power, wherein the indicator light signal is configured to have a duty cycle of less than approximately 25 percent.

12. The telephone server of claim 9 further comprising:  
    wherein the transformer circuit is also configured to provide the indicator light power in response to the primary voltage, and

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wherein indicator light circuitry is configured to provide a peak voltage of the indicator light power to no more than approximately one half the maximum number of telephones.

13. The telephone server of claim 9  
wherein the ringer circuitry is also configured to receive a ring enable signal; and  
wherein the ringing signal is configured to have a duty cycle of less than approximately 33 percent.

14. The telephone server of claim 13 wherein the ringer circuitry is configured to provide the ringer signal to no more than approximately one third the maximum number of telephones.

15. The telephone server of claim 9 wherein the first operational voltage is greater than the second operational voltage.

16. The telephone server of claim 15 wherein the first operational voltage is approximately twice the second operational voltage.

17. The telephone server of claim 9 further comprising:  
wherein the transformer circuit is also configured to receive an enabling signal from the computer system; and  
wherein the transformer circuit is also configured to provide the first operational power in response to the enabling signal.

18. A method for a telecommunications interface for providing drive voltages for a plurality of telephones coupled thereto, the telecommunications interface also coupled to a computer system, the computer system providing a first drive voltage and a second drive voltage to the telecommunications interface, the method including:

receiving an enabling signal for the telecommunications interface from the computer system;  
generating a ringing drive voltage within the telecommunications interface in response to the first drive voltage and to the enabling signal, wherein a ringer circuit is configured to provide the ringing drive voltage to a subset of a maximum number of telephones that may be coupled to the telecommunications interface at one time, and wherein the telephones are coupled to separate telephone lines;

generating a first operational drive voltage for a telephone from the plurality of telephones within the telecommunications interface when a call directed to the telephone is a directly dialed call from the telephone trunk;

generating a second operational drive voltage for the telephone within the telecommunications interface when the call directed to the telephone is an internally dialed call from another telephone of the plurality of telephones; and

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providing the second operational drive voltage to the telephone when the call is an internally dialed call.

19. The method of claim 18 further comprising: providing the first operational drive voltage to the telephone when the call is a directly dialed call.

20. The method of claim 18 wherein the first operational drive voltage for the telephone is generated in response to the enabling signal.

21. The method of claim 20 wherein the second operational drive voltage for the telephone is generated in response to the enabling signal.

22. The method of claim 18 further comprising:  
generating an indicator light drive voltage within the telecommunications interface in response to the primary voltage.

23. (Amended) The method of claim 22  
~~wherein a maximum number of telephones from the plurality of telephones can be coupled to the telecommunications interface; and~~  
wherein a peak voltage of the indicator light drive voltage is provided to no more than approximately one half of the maximum number of telephones at a time.

24. The method of claim 23 wherein the peak voltage of the indicator light drive voltage is provided to no more than approximately one quarter of the maximum number of telephones at a time.

25. (Amended) The method of claim 18  
~~wherein a maximum number of telephones from the plurality of telephones can be coupled to the telecommunications interface; and~~  
wherein a peak voltage of the ringing drive voltage is provided to no more than approximately one half of the maximum number of telephones at a time.

26. The method of claim 25 wherein the peak voltage of the ringing drive voltage is provided to no more than approximately one third of the maximum number of telephones at a time.

27. The method of claim 26 wherein a ring signal derived from the ringing drive voltage has a duty cycle of less than approximately 33 percent.

28. The method of claim 18 wherein the first operational drive voltage has a magnitude approximately twice a magnitude of the second operational drive voltage.